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| 09/665,159      | 09/19/2000  | Yusaku Fujii         | 826.1621/JDH        | 4866             |

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EXAMINER

AHMED, SAMIR ANWAR

| ART UNIT | PAPER NUMBER |
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2623

DATE MAILED: 09/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/665,159

Applicant(s)

FUJII, YUSAKU

Examiner

Samir A. Ahmed

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4, 6-48, 50 and 51 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-48, 50-51 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4/14/05</u> . | 6) <input type="checkbox"/> Other: _____  |

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1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/06/04 has been entered.
2. In response to Applicant's amendment filed 12/01/04, the objection to claims 48-49 is withdrawn.
3. Applicant's arguments filed 12/01/04 have been fully considered but they are not persuasive, for the following reasons:

Applicant alleges, "In Fuji, the distance is used in a comparison of a projected point [,]" (page 14, lines 15-31). The Examiner disagrees. Fuji clearly discloses, that each feature point include information of other feature points connected thereto and information of other feature points on adjacent ridges (namely, ridge connection relation information) along with the position, type, and direction thereof (col. 8, lines 33-38) (i.e., each feature point includes ridge connection relation information of other feature points on adjacent ridges (vicinal points) along with their position, type, and direction information. As clearly shown by Figs. 4, col. 9, lines 12-31, and Fig. 10, col. 15, lines 44-52, for a target feature point P5 (point to be matched in input fingerprint and registered fingerprint), ridge connection relation information from point P5 to adjacent feature points (vicinal points) is considered including Type (bifurcation or end point), position and direction (0-th degree, first degree, -first degree). The ridge connection

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relation information (vicinal feature point information including type, position and direction) is compared in the matching process between an input fingerprint and registered fingerprint to identify the fingerprint (col. 11, lines 58-63, col. 12, lines 8-13).

Applicant alleges, " The dependent claims [,]" (page 15, lines 1-17). The Examiner disagrees. Fuji clearly discloses that the distance on a ridge from a measurement start point to another feature point is measured by number of ridges  $n$  ( $n$  is an integer other than 0), referred to as an  $n$ th degree and direction information from the measurement start point to another feature point is included in the ridge connection relation information (vicinal points) (col. 11, lines 9-31). As clearly shown by Fig. 10, an other feature point p55 (vicinal feature point) which is a ridge bifurcation point (type) is located in a direction 0-th degree from target feature point P54 which is an end point (i.e., on the same ridge). Adjacent feature point p53 (vicinal point) which is a bifurcation point (type) is located in a direction first degree and second degree from target feature point P54 (i.e., one and two ridges away in the above (positive) direction from target feature point P54). Adjacent feature point p58 (vicinal point) which is a bifurcation point (type) is located in a direction - second degree from target feature point P54 (i.e., two ridges away in the below (negative) direction from target feature point P54). It is clear that the number of ridges is counted and is determined in a positive and negative directions based on the location of the vicinal feature point with respect to the target feature point.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4, 6-48, 50-51 are rejected under 35 U.S.C. 102(e) as being anticipated by Fujii et al. (6,233,348). The grounds for rejections stated in paragraph 4 of the Office Action mailed on 6/01/04 paper number 9, are incorporated by reference herein.

Regarding claim 1, Fujii et al. ("Fujii") discloses an apparatus comparing an obtained first fingerprint with a preliminarily registered second fingerprint (Col. 8, lines 23-32), and determining whether or not the fingerprints match each other, comprising:

a ridge relation obtaining unit obtaining relation of a ridge containing a vicinal feature point near a feature point to be checked in a matching process performed on the first and the second fingerprints to the ridge containing the feature point to be checked in the matching process (Figure 4; Col. 9, lines 12-28), and a

matching unit performing the matching process by searching the second fingerprint containing the vicinal feature point near the feature point to be checked in the matching process for the relation of the ridge containing the vicinal feature point to the ridge containing the feature point to be checked in the matching process (Col. 11, lines 58-67 and Col. 12, lines 1-2) and wherein when the first and second fingerprints match

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in at least one of position, type, and direction of the vicinal feature points, it is determined that the feature information of feature points to be checked contained in the first and the second fingerprints are same feature points [each feature point include information of other feature points connected thereto and information of other feature points on adjacent ridges (namely, ridge connection relation information) along with the position, type, and direction thereof (col. 8, lines 33-38) (i.e., each feature point includes ridge connection relation information of other feature points on adjacent ridges (vicinal points) along with their position, type, and direction information. As clearly shown by Figs. 4, col. 9, lines 12-31, and Fig. 10, col. 15, lines 44-52, for a target feature point P5 (point to be matched in input fingerprint and registered fingerprint), ridge connection relation information from point P5 to adjacent feature points (vicinal points) is considered including Type (bifurcation or end point), position and direction (0-th degree, first degree, -first degree). The ridge connection relation information (vicinal feature point information including type, position and direction) is compared in the matching process between an input fingerprint and registered fingerprint to identify the fingerprint (col. 11, lines 58-63, col. 12, lines 8-13 and Col. 13, lines 28-31)].

Regarding claims 2-3 refer to claim 2-3 rejections stated in paragraph 4 of the Office Action mailed on 6/01/04 paper number 9, are incorporated by reference herein.

Regarding claim 4, Fujii discloses when the feature information about the vicinal feature points matches in a predetermined range, a number of ridges between the feature point to be checked and a ridge containing the vicinal feature point matches a value obtained by counting a number of ridges in an opposite direction from the feature

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point to be checked to the vicinal feature point, and a number of ridges between the feature point to be checked and a ridge containing the vicinal feature point obtained by counting a number of ridges in a direction from the feature point to be checked to the vicinal feature point, it is determined that the feature points are the same feature points [the distance on a ridge from a measurement start point to another feature point is measured by number of ridges  $n$  ( $n$  is an integer other than 0), referred to as an  $n$ -th degree and direction information from the measurement start point to another feature point is included in the ridge connection relation information (vicinal points) (col. 11, lines 9-31). As clearly shown by Fig. 10, an other feature point p55 (vicinal feature point) which is a ridge bifurcation point (type) is located in a direction 0-th degree from target feature point P54 which is an end point (i.e., on the same ridge). Adjacent feature point p53 (vicinal point) which is a bifurcation point (type) is located in a direction first degree and second degree from target feature point P54 (i.e., one and two ridges away in the above (positive) direction from target feature point P54). Adjacent feature point p58 (vicinal point) which is a bifurcation point (type) is located in a direction -second degree from target feature point P54 (i.e., two ridges away in the below (negative) direction from target feature point P54). It is clear that the number of ridges is counted and is determined in a positive and negative directions based on the location of the vicinal feature point with respect to the target feature point. A determination is made of whether or not the feature points are the same or not (Col. 13, lines 15-28; Figure 10)].

Regarding claims 6-8 refer to claim 6-8 rejections stated in paragraph 4 of the Office Action mailed on 6/01/04 paper number 9, are incorporated by reference herein.

Regarding claim 9 refer to claim 9 rejection stated in paragraph 4 of the Office Action mailed on 6/01/04 paper number 9, are incorporated by reference herein. Fujii further discloses, wherein when the first and second fingerprints match in at least one of position, type, and direction of the vicinal feature points, it is determined that the feature information of feature points to be checked contained in the first and the second fingerprints are same feature points [each feature point include information of other feature points connected thereto and information of other feature points on adjacent ridges (namely, ridge connection relation information) along with the position, type, and direction thereof (col. 8, lines 33-38) (i.e., each feature point includes ridge connection relation information of other feature points on adjacent ridges (vicinal points) along with their position, type, and direction information. As clearly shown by Figs. 4, col. 9, lines 12-31, and Fig. 10, col. 15, lines 44-52, for a target feature point P5 (point to be matched in input fingerprint and registered fingerprint), ridge connection relation information from point P5 to adjacent feature points (vicinal points) is considered including Type (bifurcation or end point), position and direction (0-th degree, first degree, -first degree). The ridge connection relation information (vicinal feature point information including type, position and direction) is compared in the matching process between an input fingerprint and registered fingerprint to identify the fingerprint (col. 11, lines 58-63, col. 12, lines 8-13 and Col. 13, lines 28-31)].

Regarding claims 10-17 refer to claim 10-17 rejections stated in paragraph 4 of the Office Action mailed on 6/01/04 paper number 9, are incorporated by reference herein.



Regarding claim 18 refer to claim 18 rejection stated in paragraph 4 of the Office Action mailed on 6/01/04 paper number 9, are incorporated by reference herein. Fujii further discloses, wherein when the first and second fingerprints match in at least one of position, type, and direction of the vicinal feature points, it is determined that the feature information of feature points to be checked contained in the first and the second fingerprints are same feature points [each feature point include information of other feature points connected thereto and information of other feature points on adjacent ridges (namely, ridge connection relation information) along with the position, type, and direction thereof (col. 8, lines 33-38) (i.e., each feature point includes ridge connection relation information of other feature points on adjacent ridges (vicinal points) along with their position, type, and direction information. As clearly shown by Figs. 4, col. 9, lines 12-31, and Fig. 10, col. 15, lines 44-52, for a target feature point P5 (point to be matched in input fingerprint and registered fingerprint), ridge connection relation information from point P5 to adjacent feature points (vicinal points) is considered including Type (bifurcation or end point), position and direction (0-th degree, first degree, -first degree). The ridge connection relation information (vicinal feature point information including type, position and direction) is compared in the matching process between an input fingerprint and registered fingerprint to identify the fingerprint (col. 11, lines 58-63, col. 12, lines 8-13 and Col. 13, lines 28-31)].

Regarding claims 19-22 refer to claim 19-22 rejections stated in paragraph 4 of the Office Action mailed on 6/01/04 paper number 9, are incorporated by reference herein.

Regarding claim 23 refer to claim 23 rejection stated in paragraph 4 of the Office Action mailed on 6/01/04 paper number 9, are incorporated by reference herein. Fujii further discloses, wherein when the first and second fingerprints match in at least one of position, type, and direction of the vicinal feature points, it is determined that the feature information of feature points to be checked contained in the first and the second fingerprints are same feature points [each feature point include information of other feature points connected thereto and information of other feature points on adjacent ridges (namely, ridge connection relation information) along with the position, type, and direction thereof (col. 8, lines 33-38) (i.e., each feature point includes ridge connection relation information of other feature points on adjacent ridges (vicinal points) along with their position, type, and direction information. As clearly shown by Figs. 4, col. 9, lines 12-31, and Fig. 10, col. 15, lines 44-52, for a target feature point P5 (point to be matched in input fingerprint and registered fingerprint), ridge connection relation information from point P5 to adjacent feature points (vicinal points) is considered including Type (bifurcation or end point), position and direction (0-th degree, first degree, -first degree). The ridge connection relation information (vicinal feature point information including type, position and direction) is compared in the matching process between an input fingerprint and registered fingerprint to identify the fingerprint (col. 11, lines 58-63, col. 12, lines 8-13 and Col. 13, lines 28-31)]

Regarding claims 24-30 refer to claim 24-30 rejections stated in paragraph 4 of the Office Action mailed on 6/01/04 paper number 9, are incorporated by reference herein.

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Regarding claim 31 refer to claim 30 rejection stated in paragraph 4 of the Office Action mailed on 6/01/04 paper number 9, are incorporated by reference herein. Fujii further discloses, wherein when the first and second fingerprints match in at least one of position, type, and direction of the vicinal feature points, it is determined that the feature information of feature points to be checked contained in the first and the second fingerprints are same feature points [each feature point include information of other feature points connected thereto and information of other feature points on adjacent ridges (namely, ridge connection relation information) along with the position, type, and direction thereof (col. 8, lines 33-38) (i.e., each feature point includes ridge connection relation information of other feature points on adjacent ridges (vicinal points) along with their position, type, and direction information. As clearly shown by Figs. 4, col. 9, lines 12-31, and Fig. 10, col. 15, lines 44-52, for a target feature point P5 (point to be matched in input fingerprint and registered fingerprint), ridge connection relation information from point P5 to adjacent feature points (vicinal points) is considered including Type (bifurcation or end point), position and direction (0-th degree, first degree, -first degree). The ridge connection relation information (vicinal feature point information including type, position and direction) is compared in the matching process between an input fingerprint and registered fingerprint to identify the fingerprint (col. 11, lines 58-63, col. 12, lines 8-13 and Col. 13, lines 28-31)].

Regarding claims 32-39 refer to claim 32-39 rejections stated in paragraph 4 of the Office Action mailed on 6/01/04 paper number 9, are incorporated by reference herein.

Regarding claim 40 refer to claim 40 rejection stated in paragraph 4 of the Office Action mailed on 6/01/04 paper number 9, are incorporated by reference herein. Fujii further discloses, wherein when the first and second fingerprints match in at least one of position, type, and direction of the vicinal feature points, it is determined that the feature information of feature points to be checked contained in the first and the second fingerprints are same feature points [each feature point include information of other feature points connected thereto and information of other feature points on adjacent ridges (namely, ridge connection relation information) along with the position, type, and direction thereof (col. 8, lines 33-38) (i.e., each feature point includes ridge connection relation information of other feature points on adjacent ridges (vicinal points) along with their position, type, and direction information. As clearly shown by Figs. 4, col. 9, lines 12-31, and Fig. 10, col. 15, lines 44-52, for a target feature point P5 (point to be matched in input fingerprint and registered fingerprint), ridge connection relation information from point P5 to adjacent feature points (vicinal points) is considered including Type (bifurcation or end point), position and direction (0-th degree, first degree, -first degree). The ridge connection relation information (vicinal feature point information including type, position and direction) is compared in the matching process between an input fingerprint and registered fingerprint to identify the fingerprint (col. 11, lines 58-63, col. 12, lines 8-13 and Col. 13, lines 28-31)].

Regarding claims 42-44 refer to claim 42-44 rejections stated in paragraph 4 of the Office Action mailed on 6/01/04 paper number 9, are incorporated by reference herein.

Regarding claim 45 refer to claim 45 rejection stated in paragraph 4 of the Office Action mailed on 6/01/04 paper number 9, are incorporated by reference herein. Fujii further discloses, wherein when the first and second fingerprints match in at least one of position, type, and direction of the vicinal feature points, it is determined that the feature information of feature points to be checked contained in the first and the second fingerprints are same feature points [each feature point include information of other feature points connected thereto and information of other feature points on adjacent ridges (namely, ridge connection relation information) along with the position, type, and direction thereof (col. 8, lines 33-38) (i.e., each feature point includes ridge connection relation information of other feature points on adjacent ridges (vicinal points) along with their position, type, and direction information. As clearly shown by Figs. 4, col. 9, lines 12-31, and Fig. 10, col. 15, lines 44-52, for a target feature point P5 (point to be matched in input fingerprint and registered fingerprint), ridge connection relation information from point P5 to adjacent feature points (vicinal points) is considered including Type (bifurcation or end point), position and direction (0-th degree, first degree, -first degree). The ridge connection relation information (vicinal feature point information including type, position and direction) is compared in the matching process between an input fingerprint and registered fingerprint to identify the fingerprint (col. 11, lines 58-63, col. 12, lines 8-13 and Col. 13, lines 28-31)].

Regarding claim 46 refer to claim 46 rejection stated in paragraph 4 of the Office Action mailed on 6/01/04 paper number 9, are incorporated by reference herein. Fujii further discloses, wherein when the first and second fingerprints match in at least one of

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position, type, and direction of the vicinal feature points, it is determined that the feature information of feature points to be checked contained in the first and the second fingerprints are same feature points [each feature point include information of other feature points connected thereto and information of other feature points on adjacent ridges (namely, ridge connection relation information) along with the position, type, and direction thereof (col. 8, lines 33-38) (i.e., each feature point includes ridge connection relation information of other feature points on adjacent ridges (vicinal points) along with their position, type, and direction information. As clearly shown by Figs. 4, col. 9, lines 12-31, and Fig. 10, col. 15, lines 44-52, for a target feature point P5 (point to be matched in input fingerprint and registered fingerprint), ridge connection relation information from point P5 to adjacent feature points (vicinal points) is considered including Type (bifurcation or end point), position and direction (0-th degree, first degree, -first degree). The ridge connection relation information (vicinal feature point information including type, position and direction) is compared in the matching process between an input fingerprint and registered fingerprint to identify the fingerprint (col. 11, lines 58-63, col. 12, lines 8-13 and Col. 13, lines 28-31)].

Regarding claim 47 refer to claim 47 rejection stated in paragraph 4 of the Office Action mailed on 6/01/04 paper number 9, are incorporated by reference herein. Fujii further discloses, wherein when the first and second fingerprints match in at least one of position, type, and direction of the vicinal feature points, it is determined that the feature information of feature points to be checked contained in the first and the second fingerprints are same feature points [each feature point include information of other

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feature points connected thereto and information of other feature points on adjacent ridges (namely, ridge connection relation information) along with the position, type, and direction thereof (col. 8, lines 33-38) (i.e., each feature point includes ridge connection relation information of other feature points on adjacent ridges (vicinal points) along with their position, type, and direction information. As clearly shown by Figs. 4, col. 9, lines 12-31, and Fig. 10, col. 15, lines 44-52, for a target feature point P5 (point to be matched in input fingerprint and registered fingerprint), ridge connection relation information from point P5 to adjacent feature points (vicinal points) is considered including Type (bifurcation or end point), position and direction (0-th degree, first degree, -first degree). The ridge connection relation information (vicinal feature point information including type, position and direction) is compared in the matching process between an input fingerprint and registered fingerprint to identify the fingerprint (col. 11, lines 58-63, col. 12, lines 8-13 and Col. 13, lines 28-31)].

Regarding claim 48, Fujii discloses a method of comparing first and second fingerprints, comprising:

identifying feature points of the first and second fingerprints in fingerprint ridges (Col. 8, lines 9-22),

comparing feature point information of a target feature point of a ridge of the first fingerprint with a corresponding feature point of a ridge in the second fingerprint (Col. 11, line 58-Col. 12, line 10) where the feature point information compared includes position, type and direction [each feature point include information of other feature points connected thereto and information of other feature points on adjacent ridges

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(namely, ridge connection relation information) along with the position, type, and direction thereof (col. 8, lines 33-38) (i.e., each feature point includes ridge connection relation information of other feature points on adjacent ridges (vicinal points) along with their position, type, and direction information. As clearly shown by Figs. 4, col. 9, lines 12-31, and Fig. 10, col. 15, lines 44-52, for a target feature point P5 (point to be matched in input fingerprint and registered fingerprint), ridge connection relation information from point P5 to adjacent feature points (vicinal points) is considered including Type (bifurcation or end point), position and direction (0-th degree, first degree, -first degree). The ridge connection relation information (vicinal feature point information including type, position and direction) is compared in the matching process between an input fingerprint and registered fingerprint to identify the fingerprint (col. 11, lines 58-63, col. 12, lines 8-13 and Col. 13, lines 28-31)],

comparing the feature point information of feature points neighboring the target and corresponding feature points in corresponding ridges, respectively, in the first and second fingerprints (Col. 8, lines 33-45; Col. 12, lines 3-19), and

determining whether there is a match between the first and second feature points responsive to the comparisons (Col. 12, lines 20-29) with a match existing when there is a match in one of the position, type and direction in vicinal feature points [As clearly shown by Figs. 4, col. 9, lines 12-31, and Fig. 10, col. 15, lines 44-52, for a target feature point P5 (point to be matched in input fingerprint and registered fingerprint), ridge connection relation information from point P5 to adjacent feature points (vicinal points) is considered including Type (bifurcation or end point), position and direction (0-



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th degree, first degree, -first degree). The ridge connection relation information (vicinal feature point information including type, position and direction) is compared in the matching process between an input fingerprint and registered fingerprint to identify the fingerprint (col. 11, lines 58-63, col. 12, lines 8-13 and Col. 13, lines 28-31)],

Claim 51 is a broader version of claim 48 and is rejected for the same grounds of rejection stated in claim 48 rejection.

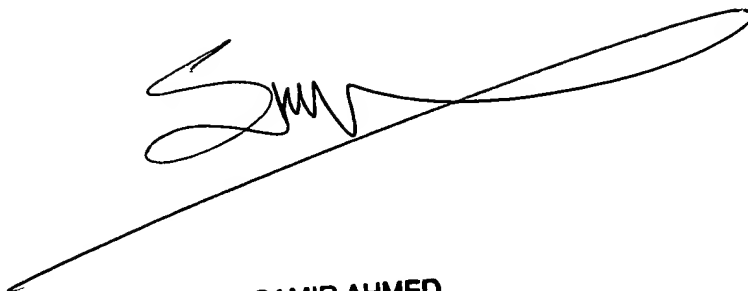
Regarding claim 51, Fujii discloses the feature point information comprising one of position, type, and direction are compared ( Col. 8, lines 33-38, Col. 12, lines 20-29).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samir A. Ahmed whose telephone number is (571) 272-7413. The examiner can normally be reached on Mon-Fri 8:30am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on (571) 272-7414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SA

A handwritten signature in black ink, appearing to be 'Samir Ahmed', written in a cursive style with a long horizontal stroke extending to the right.

**SAMIR AHMED  
PRIMARY EXAMINER**